



INTRODUCTION

A HEARTY Welcome to JACC: Cardiovascular Imaging

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Cardiac imaging has occupied a central place in cardiovascular diagnosis since the birth of the specialty at the beginning of the 20th century. Early in the century, the only available imaging techniques were standard roentgenography and fluoroscopy, which despite their limited accuracy, provided useful information about the size, shape, and motion of the heart.

Angiography with intravenous injection of iodinated contrast was developed in the early 1940s.



After the development of cardiac catheterization, selective angiography with injection of contrast into or proximal to the chamber or structure of interest was perfected. This constituted a profound advance because it allowed,

for the first time, detailed assessment both of the structure and function of the heart. Cineangiography followed soon thereafter and provided assessment during all phases of cardiac cycles. Selective coronary cinearteriography, described in 1958, has had a profound influence on cardiac care; its importance grew and was applied in an estimated 2 million persons in the U.S. in 2005.

Despite its great advantages, selective angiography is an invasive technique that may be uncomfortable, entails some minimal risk to the patient, and is expensive. It can be applied only a limited number of times in each patient and it is not suitable for screening. Therefore, physicians caring for patients with known or suspected heart disease yearned for noninvasive cardiac imaging. Fortunately, 2 new techniques—echocardiography and nuclear imaging—became available in the 1960s and have im-

proved progressively since then. Literally tens of millions of these examinations are performed each year, transforming medical practice. In the 1980s, 3 new noninvasive imaging techniques—computed tomography (CT), cardiac magnetic resonance (CMR) imaging, and positron emission tomography (PET, a nuclear technique)—emerged. Each of these provides information on cardiac structure and function that is an order of magnitude greater than the earlier imaging techniques.

None of the aforementioned techniques are static and all are undergoing progressive refinement. Many important advances have been made by subspecialists in a single technique such as echocardiographers, nuclear cardiologists, and specialists in CT, CMR, or PET imaging, respectively. Each of these imaging modalities have their individual training programs, and the advances in these fields are described in specialized journals, each devoted to a single technique. Although this approach has been responsible for spectacular advances in each modality, it has led to fragmentation of patient evaluation, at times to competition between individual modalities, and to

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increased costs at a time of diminishing resources to pay for health care.

There is a growing consensus that the time has come to consider cardiovascular imaging in a more comprehensive, unified manner. We need a new generation of cardiac imagers who are expert with the entire portfolio of modalities and who can provide a nonbiased selection of the tech-

nique that can best solve the clinical or research problem at hand. To develop these broadly-based experts, we need new unified training programs that break down what are sometimes artificial interdepartmental and intradepartmental barriers.

Another important tool in shifting the imaging paradigm is to develop a journal of cardiovascular imaging. The Publications Committee of the American College of Cardiology and its talented staff, working closely with the College leadership,

developed a vision for and then the concrete plans for the creation of *JACC: Cardiovascular Imaging*. The committee and its consultants selected the Editor-in-Chief, Dr. Jagat Narula, from a group of distinguished cardiac imagers. Dr. Narula has put together an outstanding group of associate editors, editorial board members, and consultants. They now deserve the cooperation of the entire cardiovascular community as they proceed on their important mission.